5th INTERNATIONAL CONFERENCE ON PEDESTRIAN AND EVACUATION DYNAMICS
March 8-10, 2010
National Institute of Standards and Technology, Gaithersburg, MD USA

Time	March 8, 2010 – Data Collection	
7 - 8	Registration	
8 – 8:50	*Keynote: Five Grand Challenges in Pedestrian and Evacuation Dynamics, *Jason Averill, National Institute of Standards and Technology*	
8:50 – 9:00	BREAK	
9-10:40	**Data Collection (Evacuation)** Chaired by: Daniel Nilsson	**Data Collection (Pedestrian)** Chaired by: Erica Kuligowski
	*Emergency door capacity: influence of population composition and stress level *Winnie Daamen and Serge Hoogendoorn*	*New Data for Human Performance of Plane Corridors *Andreas Winkens, Armin Seyfried and Wolfram Klingsch*
	Overall and Local Movement Speeds During Fire Drill Evacuations in Buildings Up to 31 Stories *Richard Peacock and Erica Kuligowski*	Influence of boundary parameters on pedestrian bottleneck flow *Tobias Rupprecht*
	Predicting the Probability and Pattern of Evacuation Congestion Occurrence relating to Time-Space in a High-rise Apartment Housing *Jun-ho Choi and Won-hwa Hong*	Realtime video analysis of pedestrians to support agent simulation of people behavior *Ralph Majer, Norbert Link, Olaf Junker and Verena Strauss*
	Way- And Exit- Finding During The Evacuation In Large-Scale Underground Shopping Mall — Field Experiments In An Underground Shopping Mall Acutally In Service *Shuji Moriyama, Yuji Hasemi, Junko Ogawa, Tomonori Sano, Tadahisa Jin and Takahiro Hebiishi*	Walking Speeds on Stairs: Effects of pedestrian characteristics and stair designs *Taku Fujiyama and Nick Tyler*
10:40-11:00	BREAK	
11:00-12:40	**Data Collection (Vulnerable Groups)** Chaired by: Rita Fahy	**Theory for Models** Chaired by: Norman Groner
	*Travel Along Stairs by Individuals with Disabilities: A Summary of Devices Used During Routine Travel and Travel During Emergencies *Glenn Hedman*	Pre-Warning Staff Delay: A Forgotten Component in ASET/RSET Calculations? *Steven Gwynne, Dave Purser, Dave Boswell and Erica Kuligowski*
	The Escape training problems of earthquake in China *ChunXia Lu*	Macroscopic Fundamental Diagrams for pedestrian networks in different conditions *Serge Hoogendoorn, Mario Campanella and Winnie Daamen*
	An Experimental Evaluation of Movement Devices used to assist People with Reduced Mobility in High-Rise Building Evacuations. *Ton Adams and Edwin Galea*	Practical Modeling of Crowd Behavior Using a Cognitive Feedback Model *Yiannis Papelis, Rani Kady, Poornima Madhavan and Lisa Bair*
	Evacuation dynamics of children –Walking speeds, flows through doors in day-care centres *Aldís Rún Lárusdóttir and Anne Simone Dederichs*	How do people with disabilities consider fire safety and evacuation possibilities in a cultural building? *Lena Kecklund, Elena Siré, Staffan Bengtsson and Kristin Andrée*
12:40-13:40	LUNCH	
13:40 – 15:20	**Data Collection (Transport)** Chaired by: Richard Peacock	**Data Collection Methods** Chaired by: Jake Pauls
	Evacuation analysis of 1000+ seat Blended Wing Body aircraft configurations: Computer Simulations and Large-Scale Evacuation Experiment *Edwin Galea, Lazaros Filippidis, Zhaozhi Wang, John Ewer and Peter Lawrence*	Extended Range Telepresence for Evacuation Training in Pedestrian Simulations *Antonia Pérez Arias, Uwe D. Hanebeck, Peter Ehrhardt, Stefan Hengst, Tobias Kretz and Peter Vortisch*
	Collection of Evacuation Data for Large Passenger Vessels at Sea *Edwin Galea, Robert Brown, Lazaros Filippidis and Steven Deere*	Proof of Concept: Use of Eye Tracking to Record How People Use Exit Signage *Robert Till and Jason Babcock*
	Experimental Research on Investigation of Metro Passenger Evacuation Behaviors in case of Emergency *He Li, Zhong Maohua, Shi Congling, Shi Jiehong, Chen Haicheng and Xu Qiaoxiang*	Measurement techniques for unannounced evacuation experiments *Daniel Nilsson and Håkan Frantzich*

	*Modelling Random Taste Variations on Level Changes in Passenger Route Choice in a Public Transport Station *Irmgard Zeiler, Christian Rudloff and Dietmar Bauer*	**Automation of Pedestrian Tracking in a Crowded Situation** *Saman Saadat, Heng Sovannarith and Kardi Teknomo*
	CONFERENCE DINNER – BUS TO WASHINGTON, DC	

Time	March 9, 2010 – Modeling	
7 – 8:20	Registration	
8:20 – 10:00	**Large-scale modeling** Chaired by: Weiguo Song	**General Model Development (1)** Chaired by: Ed Galea
	Runtime Optimization of Forced Based Models within the Hermes Project *Armin Seyfried and Jonas Mehlich*	Risk minimizing evacuation strategies under uncertainty *Gregor Lämmel, Hubert Klüpfel and Kai Nagel*
	A Dynamic Simulation on Crowd Congestion in Large-Scale Terminal Station Complex in an Official Announcement Advisory Information *Qing-Lin Cui, Manabu Ichikawa, Toshiyuki Kaneda And Hiroshi Deguchi*	Methods for Improving Efficiency of Queueing Systems *Daichi Yanagisawa, Yushi Suma, Yuki Tanaka, Akiyasu Tomoeda, Kazumichi Ohtsuka and Katsuhiro Nishinari*
	Evacuation Assistance for a Sports Arena Using a Macroscopic Network Model *Andreas Schomborg, Klaus Nökel and Armin Seyfried*	An Ontological Framework for Crowd Profiling at Pop-Rock Music Concerts *Sara Manzoni*
	Validation of the Potential-based Evacuation Model of City Residents in Post-earthquake Fire *Tomoaki Nishino, Shin-ich Tsuburaya, Keisuke Himoto and Takeyoshi Tanaka*	Cellular Automata Evacuation Model Considering Information Transfer in Building with Obstacles *Kongjin Zhu, Lizhong Yang and Shaobo Liu*
10:00-10:20	BREAK	
10:20-12:00	**Transport modeling** Chaired by: Hubert Klupfel	**General Model Development (2)** Chaired by: Armin Seyfried
	Assistance of Evacuation Planning with High-Speed Network Model-based Pedestrian Simulator *Tomohisa Yamashita, Shunsuke Soeda and Itsuki Noda*	Cluster Flow Problems *Horst W. Hamacher, Kathrin Leiner and Stefan Ruzika*
	An Evacuation Model for High Speed Trains *Jorge Capote, Daniel Alvear, Mariano Lázaro, Orlando Abreu and Arturo Cuesta*	Agent-based simulation of architectural clues' effects on human behavior and decision making in fire emergency evacuation *Shaden Abusafieh*
	A Stochastic Evacuation Model for Fire Life Safety Assessment in Transportation System *Kai Kang*	A multi-grid model for evacuation coupling with the effects of fire smoke temperature *Zhiming Fang, Weiguo Song and Hao Wu*
	Comparison of a Grid-based and Continuous Space Pedestrian Model: Analysis of Normal Operations and Evacuation at a Train Station *Christian Castle and Nicholas Waterson*	
12:00-13:00	LUNCH	
13:00 – 14:40	POSTER SESSION (posters listed below schedule)	
14:40 – 16:20	**Model Calibration/Validation (1)** Chaired by: Steve Gwynne	**Modeling Methods (Spatial)** Chaired by: Pete Thompson
	Towards Automatic and Robust Adjustment of Human Behavioral Parameters in a Pedestrian Stream Model to Measured Data. *Maria Davidich and Gerta Koester*	Implementing A Hybrid Space Discretisation within an Agent Based Evacuation Model *Nitish Chooramun, Peter Lawrence and Edwin Galea*
	Comparing pedestrian movement simulation models for a crossing area based on real world data *Dietmar Bauer*	Bidirectional coupling of macroscopic and microscopic approaches for pedestrian behavior prediction *Angelika Kneidl, André Borrmann, Stefan Ruzika, Horst W. Hamacher, Gerta Köster and Ernst Rank*
	Towards a calibration of the floor field cellular automaton model *Andreas Schadschneider*	Emergency Evacuation Modeling: A Novel Approach to Layout Designs and Evacuation Procedures *Rani Kady and Andreas Tolk*
	To See Behind the Curtain – A Methodical Approach to Identify Calculation Methods of Closed-Source Evacuation Software Tools *Christian Rogsch and Wolfram Klingsch*	The use of fine – coarse network model for simulating building evacuation with information system *Marcin Cisek and Michal Kapalka*
16:20 – 16:40	BREAK	

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	Model Calibration/Validation (2) Chaired by: Christian Rogsch	**Modeling Methods (General)** Chaired by: Ai Sekizawa
16:40 – 18:20	**Analyzing Stop-and-Go Waves by Experiments and Modeling** *Andrea Portz and Armin Seyfried*	**Simulation of Pedestrian Flow outside a Single-exit Room in Mean-field Approximation Model** *Jun Zhang and Weiguo Song*
	Modification of the route choice activity of the Social Force Model for pedestrian dynamics Zarita Zainuddin and Mohammed Shuaib	**Sandwich Approach for Evacuation Time Bounds** *Horst W. Hamacher, Stephanie Heller, Stefan Ruzika, Wolfram Klein and Gerta Köster*
	Experimental Studies of Crowd Flow Passing through the Simple-shaped Room and Validating the Evacuation Simulation. *Tomonori Sano*	**A Knowledge-Based Approach to Crowd Classification** *Stefania Bandini, Lorenza Manenti, Sara Manzoni and Fabio Sartori*
	Calculating and Verifying the Staircase-Length When Performing Simulex *Hyun-Seung Hwang, Jun-ho Choi and Won-Hwa Hong*	**Towards realistic modeling of crowd compressibility** *Jaroslaw Was*

Time	March 10, 2010 – Application	
7 – 8	Registration	
8 – 8:50	***Keynote Presentations: In Memory of Dr. Guylène Proulx**, *Led by Rita Fahy, National Fire Protection Association*	
8:50 – 9:00	BREAK	
9-10:40	**Vertical Egress, Chaired by: Peter Johnson, Arup**	
	Addressing the Needs of People using Elevators for Emergency Evacuation *Richard Bukowski*	
	Stairs or Elevators? – A study of Human Factors associated with Elevator usage during Evacuations using an online Survey *Michael Kinsey, Edwin Galea and Peter Lawrence*	
	Elevator Evacuation Algorithms *Marja-Liisa Siikonen, Janne S. Sorsa*	
	Experiments for the Feasibility Study of Upward Evacuation by Moving Escalator *Emi Okamoto, Yuji Hasemi, Shuji Moriyama and Naoko Okada*	
10:40-11:00	BREAK	
11:00-12:40	**Real Events** **Chaired by: Winnie Daamen**	**Regulation/Engineering Guidance** **Chaired by: Jason Averill**
	Assessing Crowd Dynamics And Spectator Safety in Seated Areas at a Football Stadium *Zachary Au and Jenny Gilroy*	**Accessibility and Evacuation Planning – Similarities and Differences** *Judith Bendel and Hubert Klüpfel*
	Stay Or Go? Human Behaviour In Major Evacuations *Peter Johnson, Claire Johnson and Carolyn Sutherland*	**The London UK Experience of Modelling Passengers with Restricted Mobility in Transit Station Micro-Simulation Models : Does the Inclusion of PRM Entities have a Measurable Impact on Modelling Output and is the London Framework Applicable in North America and Elsewhere?** *Daniel Fisher and Andrew Jenkins*
	Analysis of Occupant Behavior during a High-rise Office Building Fire *Erica Kuligowski and Bryan Hoskins*	**Prospects for the Design of Cognitive Systems that Manage the Movement of Large Crowds** *Norman Groner and Elise Miller-Hooks*
	The Lame Horse Night-Club Fire: Disaster Timing* *I.P. Belosokhov, D.A. Samoshin, B.B. Serkov, V.V. Kholshevnikov*	**Risk Management at Major Events - Study of Behavioural Aspects and Implementation into the ASERI Microscopic Evacuation Model** *Rainer Könnecke and Volker Schneider*
12:40-13:40	LUNCH	
13:40 – 15:40	**Ensuring Quality Control in the Development and Application of Egress Models** *Moderator: Peter Thompson, Integrated Environmental Solutions, Ltd.* *Panelists: Daniel Nilsson, Lund University* *Hubert Klüpfel, TraffGo HT GmbH* *Michael Ferreira, Hughes Associates, Inc.* *Richard Peacock, National Institute of Standards and Technology* *Chris Jelenewicz, Society of Fire Protection Engineers*	
15:40-16:00	**CONCLUDING REMARKS**	

*refers to changes made since the last version of the schedule was provided online

POSTER SESSION

Presented on March 9, 2010, 13:00 to 14:40

Crowd Management based on Scientific Research to Prevent Crowd Panic & Disasters
Salim Al Bosta

Elias38: A Software Platform for Crowd Study
Stefania Bandini, Sara Manzoni, Roberto Pedroli and Giuseppe Vizzari

The Effect of Stair Width on Occupant Speed and Flow Rate for High Rise Buildings
Alyson Blair and James Milke

Using Stereo Recordings to Extract Pedestrian Trajectories Automatically in Space
Maik Boltes, Armin Seyfried, Bernhard Steffen and Andreas Schadschneider

Simulation of Pedestrians Crossing a Street
Cornelia Bönisch and Tobias Kretz

A methodology to calibrate microscopic pedestrian walking models using multiple objectives
Mario Campanella, Serge Hoogendoorn and Winnie Daamen

Emergency door capacity: influence of doorway width
Winnie Daamen and Serge Hoogendoorn

Human Guiding, Turning the Theory into Practice
Richard Eggleton and Palle Stevn

Study on the Social Psychology and Behaviors in a Subway Evacuation Drill in China
Xiaoxia GE, Dong_Wei Wei and Hongyu_Jin Jin

Sensor-assisted support tools for live evacuation
Sam Grindrod and Stephen Welch

Employing Human Egress Data
Steven Gwynne

Mutual Information for the Detection of Crush
Peter Harding, Martyn Amos and Steven Gwynne

Counterflow and Lane Formation in the FDS+Evac Evacuation Model
Simo Heliövaara, Harri Ehtamo and Timo Korhonen

Study on Evacuation Simulation in a Department Store after an Earthquake
Akihiko Hokugo, Ai Sekizawa, Shuji Kakegawa, Hiroaki Notake and Takuyuki Kaneko

Introducing Emotion Modelling to Agent-based Pedestrian Circulation Simulation
Claudia Hollmann, Peter Lawrence and Edwin Galea

Human Behavior Simulation Using MAICE Station™
Peter Hottenstein

A study of density of the person in a classroom for Building Evacuation Safety Regulations in Korea
Youn Ho Ju, Hwang Yen Kyung and Kwon Young Jin

Experiments on Egress of Persons with Mobile Disability in Train Car
Jong Hoon Kim, Woon Hyung Kim, Sam Kew Roh, Duck Hee Lee and Woo Sung Jung

On time scaling and verification of a stochastic CA pedestrian dynamics model
Ekaterina Kirik, Tat'yana Yurgel'yan and Dmitriy Krouglov

FDS+Evac: Modelling counterflow in human crowds
Timo Korhonen, Simo Hostikka and Simo Heliövaara

Computation Speed of the F.A.S.T. Model
Tobias Kretz

Behavior and Perception-based Pedestrian Evacuation Simulation
Tobias Kretz and Georg Mayer

Preliminary Research on Intelligent Video Detection for Evacuation
Qiao KUI

Analysis of Occupant Decision-Making in the World Trade Center Disaster
Erica Kuligowski

Analysis of bottleneck motion using Voronoi diagrams
Jack Liddle, Armin Seyfried and Bernhard Steffen

Modeling Evacuation in Selected Types of Buildings and an Analysis of the Achieved Results
Martin Lopusniak

Experimental investigation on the pair interaction between pedestrians
Jian Ma, Weiguo Song, Siuming Lo and Guangxuan Liao

Emergency situations in nightclubs: a discussion on how to improve the fire safety strategies through the use of evacuation modelling analysis
Rodrigo Machado and Frank Murphy

Efficiently Using Micro-Simulation to Inform Facility Design – A Case Study in Managing Complexity
Erin Morrow

Next Generation Paradigms in Pedestrian Modeling
Daniel Peterson

Next Steps for Agent-Based Simulations of Mass Egress
Doug Samuelson

Experimental Study of Pedestrian Flow in the Channel through Bottleneck
Weiguo Song, Jun Zhang and Armin Seyfried

Occupant Way-finding in Multi-Storey Bldgs
Janne S. Sorsa, Marja-Liisa Siikonen

Improved Methods for Checking Forces Based Models of Pedestrian Dynamics
Bernhard Steffen, Maik Boltes and Armin Seyfried

Pathfinder: An Agent-based Egress Simulator
Charles Thornton, Richard O'Konski and Brian Hardeman

Sonic Speed on Pedestrian Dynamics: Relation between Sonic Speed and Density
Akiyasu Tomoeda, Daichi Yanagisawa and Katsuhiro Nishinari

Sensitivity Visualization of Circulation under Congestion and Blockage
Gabriel Wurzer, Matthias Ausserer, Harry Hinneberg, Christa Illera and Andrea Rosic

Simulation for evacuation process outside a hall with obstacles
Yu Xue, San-jun Kan and Yan-fang Wei

Integration of Human Evacuation Route Optimization Model and Fire Prevention and Control System
ZHANG Peihong, PAN Gang, LI Gang and CHEN Baozhi